

ABSTRACT

A sensor array integrated electrochemical chip is provided wherein the chip has an array of electrodes. The array may be formed on a base plate bonded to a cover plate having an opening. The opening can be a window or a depression. The plates are bounded such that they define a cavity, with the array being within the cavity. Conducting lines for connecting the electrodes to electrochemical instruments may be formed on the same surface of the base plate on which the electrodes are formed. At least one of the electrodes may be covered by a coating doped with a ferrocene compound. The coating may be a supported bilayer lipid membrane doped with benzoylferrocene. The doped ferrocene compound may be oxidized.